IN THE CLAIMS:

Kindly amend claims 1, 2, 8, 10-20, 26-28 and 31-114 as shown in the following listing of claims, which replaces all previous versions and listings of claims.

1. (currently amended) A near-field optical head comprising:

a planar substrate having a first surface, a second surface disposed opposite to the first surface, and an inverted conical or pyramidal hole extending through the first and second surfaces and having at least one fine aperture formed at an apex thereof and disposed ~~on~~ in the first surface;

an optical waveguide disposed on the second surface of the planar substrate for propagating light along an optical path; and

a ~~light reflection film~~ mirror disposed in the optical waveguide for bending ~~reflecting~~ in the direction of the fine aperture the optical path of the light propagated through the optical waveguide.

2. (currently amended) A near-field optical head according to claim 1; wherein the optical waveguide extends into ~~is disposed inside of~~ the inverted conical or pyramidal hole.

3. (previously presented) A near-field optical head according to claims 1 or 2; wherein the inverted conical or pyramidal hole comprises a plurality of slant surfaces each having a different degree of slant from the other.

4. (previously presented) A near-field optical head according to claim 3; wherein one of the slant surfaces has a degree of slant smaller than a mean degree of slant of the plurality of slant surfaces and is disposed in a vicinity of the fine aperture.

5. (previously presented) A near-field optical head according to claim 3; wherein at least one of the slant surfaces has an angle of inclination smaller than 55 degrees with respect to a surface forming the fine aperture.

6. (previously presented) A near-field optical head according to claims 1 or 2; wherein the inverted conical or pyramidal hole of the planar substrate has at least one curved slant surface.

7. (previously presented) A near-field optical head according to claim 6; wherein the curved slant surface decreases in slant degree toward the fine aperture.

8. (currently amended) A near-field optical head according to claim 7; wherein the ~~light reflection film~~ mirror or the optical waveguide focuses light to the fine aperture or collimates light from the fine aperture.

9. (previously presented) A near-field optical head according to claim 8; wherein the optical waveguide comprises a core and a clad disposed over the core.

10. (currently amended) A near-field optical head according to claim 9; wherein the at least one fine aperture comprises a plurality of fine apertures; and wherein the optical waveguide and the ~~light reflection film~~ mirror guide light generated from at least one light source to the plurality of fine apertures.

11. (currently amended) A method of manufacturing a near-field optical head, comprising the steps of:

providing a planar substrate having a first surface and a second surface opposite the first surface;

forming through the first surface of the planar substrate an inverted conical or pyramidal hole having a fine aperture at an apex thereof;

forming an optical waveguide on the second surface of the planar substrate for propagating light along an optical path; and

forming a mirror ~~light reflection film~~ in the optical waveguide for bending in the direction of the fine aperture the optical path of the ~~reflecting~~ light propagated through the optical waveguide.

12. (currently amended) A method of manufacturing a near-field optical head, comprising the steps of:

providing a planar substrate having a first surface and a second surface opposite the first surface;

forming through the first surface of the planar substrate an inverted conical or pyramidal hole having a fine aperture at an apex thereof;

bonding an optical waveguide on the second surface of the planar substrate for propagating light along an optical path; and

forming a ~~light reflection film~~ mirror in the optical waveguide for bending in the direction of the fine aperture the optical path of the ~~reflecting~~ light propagated through the optical waveguide.

13. (currently amended) A method for manufacturing a near-field optical head, comprising the steps of:

providing a planar substrate having a first surface and a second surface opposite the first surface;

forming through the first surface of the planar substrate an inverted conical or pyramidal hole having a fine aperture at an apex thereof for scattering near field light;

disposing an optical waveguide on the second surface of the planar substrate for propagating light along an optical path; and

forming a ~~light reflection film~~ mirror in the optical waveguide for bending in the direction of the fine aperture the optical path of the ~~reflecting~~ light propagated through the optical waveguide.

14. (currently amended) A method for manufacturing a near-field optical head, comprising the steps of:

providing a planar substrate having a first surface and a second surface opposite the first surface;

forming through the first surface of the planar substrate an inverted conical or pyramidal hole having a fine aperture at an apex thereof for scattering near field light;

bonding an optical waveguide on the second surface of the planar substrate for propagating light along an optical path; and

forming a ~~light reflection film~~ mirror in the optical waveguide for bending in the direction of the fine aperture the optical path of the ~~reflecting~~ light propagated through the optical waveguide.

15. (currently amended) ~~In a~~ A method for manufacturing a near-field optical head, comprising the steps of: ~~having a very small aperture for producing or scattering near field light, a method for manufacturing a near field optical head characterized by including:~~

providing a planar substrate;

~~a process of~~ forming through the a surface of the planar substrate an inverted conical or pyramidal hole having a fine aperture at ~~penetrating through the planar substrate to have~~ an apex thereof for scattering near field light; ~~made as the very small aperture;~~ and

~~a process of~~ forming a light reflection film on ~~a taper~~ an inner surface of the inverted ~~cone~~ conical or pyramidal hole to reduce a diameter of the fine aperture in accordance with a thickness of the light reflection film. ~~hole, and forming a second very small aperture having a size defined by a thickness of the light reflection film and smaller than the first very small aperture.~~

16. (currently amended) ~~In a~~ A method for manufacturing a ~~near field~~ near-field optical head, comprising the steps of: ~~having a very small aperture for producing or scattering near field light, a method for manufacturing a near field optical head characterized by including:~~

providing a planar substrate;

~~a process of~~ forming through a surface of the planar substrate an inverted conical or pyramidal hole having a fine aperture at ~~penetrating through the planar substrate to have~~ an apex thereof for scattering near field light; ~~made as the very small aperture;~~ and

~~a process of~~ forming a light reflection film having a ~~partly different~~ variable thickness on an inner surface ~~a taper~~ of the inverted conical or pyramidal hole to change the shape of the fine aperture to ~~hole, and forming a second very small aperture having~~ a shape defined by ~~the~~ a thickness of the light reflection film ~~and different in shape from a shape of the first very small aperture~~.

17. (currently amended) ~~In a~~ A method for manufacturing a ~~near field~~ near-field optical head, comprising the steps of: ~~having a very small aperture for producing or scattering near field light, a method for manufacturing a near field optical head characterized by including:~~

providing a planar substrate;

~~a process of~~ forming through a surface of the planar substrate an inverted conical or pyramidal hole having a fine aperture at ~~penetrating through the planar substrate to have~~ an apex thereof for scattering near field light; ~~made as the very small aperture;~~ and

~~a process of~~ forming ~~in the planar substrate~~ a light reflection film on a surface ~~including~~ of the planar substrate

having the fine aperture to reduce a diameter of the fine aperture in accordance with a thickness of the light reflection film. ~~first very small aperture, and forming a second very small aperture having a size defined by a thickness of the light reflection film and smaller than the first very small aperture.~~

18. (currently amended) ~~In a~~ A method for manufacturing a ~~near field~~ near-field optical head, comprising the steps of: ~~having a very small aperture for producing or scattering near field light, a method for manufacturing a near field optical head characterized by including:~~

providing a planar substrate;

~~a process of~~ forming through a surface of the planar substrate an inverted conical or pyramidal hole having a fine aperture at ~~penetrating through the planar substrate to have~~ an apex thereof for scattering near field light; ~~made as the very small aperture;~~ and

~~a process of~~ forming an oxide film on a surface of the planar substrate including a taper of the inverted conical or pyramidal hole to reduce a diameter of the fine aperture in accordance with a thickness of the oxide film. ~~hole, and forming a second very small aperture having a size defined by a thickness of the oxide film and smaller than the first very small aperture.~~

19. (currently amended) ~~In a~~ A method for manufacturing a near field optical head, comprising the steps of: ~~having a very small aperture for producing or scattering near field light, a method for manufacturing a near field optical head characterized by including:~~

providing a planar substrate;

~~a process of~~ forming through a surface of the planar substrate an inverted conical or pyramidal hole having a fine aperture at ~~penetrating through the planar substrate to have~~ an apex thereof for scattering near field light; ~~made as the very small aperture;~~ and

~~a process of performing ion implant to~~ implanting ions in a surface of the planar substrate including a taper of the inverted conical or pyramidal hole to reduce a diameter of the fine aperture in accordance with an increase in a thickness of the surface of the planar substrate due to the implanted ions. ~~hole, and forming a second very small aperture having a size defined by a thickness expanded due to the ion implant and smaller than the first very small aperture.~~

20. (currently amended) A near-field optical head comprising:

a planar substrate having a first surface, a second surface disposed opposite the first surface, and an inverted conical or pyramidal hole extending through the first and

second surfaces and having a fine aperture formed at an apex thereof and disposed on the first surface; and

an optical waveguide having a first portion disposed on the second surface of the planar substrate and a second portion disposed on an inner surface of the inverted conical or pyramidal hole, the optical waveguide having a sharpened microscopic tip protruding from the fine aperture of the inverted conical or pyramidal hole.

21. (previously presented) A near-field optical head according to claim 20; further comprising a light reflection layer for reflecting light and formed on a periphery of the optical waveguide except for the sharpened microscopic tip.

22. (previously presented) A near-field optical head according to claims 20 or 21; wherein the sharpened microscopic tip has a generally square pyramid shape.

23. (previously presented) A near-field optical head according to claim 22; wherein the inverted conical or pyramid hole has a plurality of slant surfaces each having a different degree of slant from the others.

24. (previously presented) A near-field optical head according to claim 23; wherein the optical waveguide comprises a core and a clad disposed over the core.

25. (previously presented) A near-field optical head according to claim 24; wherein the planar substrate has a plurality of fine apertures; and wherein the optical waveguide and the light reflection layer guide light emitted from at least one light source toward the plurality of fine apertures.

26. (currently amended) A method for manufacturing a near-field optical head, comprising the steps of:

providing a planar substrate having a first surface and a second surface opposite the first surface;

forming an inverted conical or pyramidal hole through the first surface of the planar substrate;

providing an optical waveguide having a first portion and a second portion;

positioning the ~~disposing an~~ optical waveguide relative to the planar substrate so that the first portion of the optical waveguide is disposed on the first surface of ~~on~~ the planar substrate and the second portion of the optical waveguide is disposed on an inner surface of the inverted conical or pyramidal hole;

forming a microscopic protrusion on the second surface of the planar substrate; and

forming a light reflecting layer in the optical waveguide for reflecting light propagated through the optical waveguide.

27. (currently amended) A method for manufacturing a near-field optical head, comprising the steps of:

providing a planar substrate having a first surface and a second surface opposite the first surface;

forming through the first surface of the planar substrate an inverted conical or pyramidal hole having a fine aperture at an apex thereof; and

providing an optical waveguide having a first portion and a second portion; and

positioning the ~~disposing an~~ optical waveguide relative to the planar substrate so that the first portion of the optical waveguide is disposed on the second surface of the planar substrate and the second portion of the optical waveguide is disposed on an inner surface of the inverted conical or pyramidal hole and so that a sharpened microscopic tip of the optical waveguide protrudes from the fine aperture of the inverted conical or pyramidal hole.

28. (currently amended) A near-field optical head comprising: an optical waveguide comprised of a first clad having at least one inverted conical or pyramidal hole extending therethrough in a thickness direction thereof and having a fine aperture at an apex thereof, a core extending along a side surface of the inverted conical or pyramidal hole, and a second clad disposed over the core so that the

core is disposed between the first and second clads; and a first reflection film disposed on an end surface of the optical waveguide.

29. (previously presented) A near-field optical head according to claim 28; further comprising a second reflection film disposed on a rear surface of the first clad and having a microscopic diameter hole disposed in a position corresponding to the fine aperture.

30. (previously presented) A near-field optical head according to claims 28 or 29; wherein the end surface of the optical waveguide is curved.

31. (currently amended) A near-field optical head comprising:

an optical waveguide comprised of a clad having at least one inverted conical or pyramidal hole extending therethrough <u>in a thickness direction thereof</u> and having a fine aperture at an apex thereof, and a core extending along a side surface of the inverted conical or pyramidal hole;

a reflection film disposed on an end surface of the optical waveguide; and

a substrate bonded on the core of the optical waveguide and having a refractivity different from that of the core.

32. (currently amended) A method for manufacturing a near-field optical head, comprising the steps of:

providing a substrate;

forming a first clad on the substrate;

forming in the first clad at least one inverted conical or pyramidal hole having a fine aperture at an apex thereof so that the inverted conical or pyramidal hole extends in a thickness direction of the first clad;

forming a core ~~in a depth direction~~ along the first clad and a side surface of the inverted conical or pyramidal hole;

forming a second clad over the core so that the core is disposed between the first and second clads to form an optical waveguide comprised of the core and the first and second clads;

forming a reflection film on one end surface of the optical waveguide formed; and

removing the substrate.

33. (currently amended) In combination: a recording medium; and ~~In~~ a near field optical head for recording information to and reading-out information from a recording medium by utilizing near field light, the near field optical head having a substrate, ~~produced from a very small aperture, a near field optical head characterized by comprising: a very~~

~~small aperture formed at an apex of a taper formed by~~ an optical propagation member formed in the substrate and having ~~a~~ at least one tapered hole forming a ~~tip~~ sharpened tip converging toward ~~a~~ the recording medium, the tapered hole having a fine aperture formed at an apex thereof; a light introducing part formed in the substrate for propagating light along an optical path extending in a direction generally ~~in a~~ parallel to a surface of ~~direction with~~ the recording medium; and a light reflection layer disposed inside of the substrate for bending in the direction of the fine aperture the optical path of the ~~reflecting~~ light propagated through the light introducing part ~~toward the very small aperture~~.

34. (currently amended) A combination according to claim 33; wherein the tapered hole has a plurality of tapered surfaces having different taper angles. ~~A near field optical head according to claim 33, wherein the taper has at least one part structured by a combination of a plurality of tapers different in angle of apex spread.~~

35. (currently amended) A combination according to claim 34; wherein one of the tapered surfaces in the vicinity of the fine aperture has a greater taper angle than the average of the taper angles of the other tapered surfaces. ~~A near field optical head according to claim 34, wherein the~~

~~plurality of tapers has, in a vicinity of the very small aperture, a taper having an angle of spread greater than a mean angle of spread of the plurality of tapers.~~

36. (currently amended) A combination according to claim 33; wherein at least a portion of a surface of the tapered hole is curved. ~~near field optical head according to claim 33, wherein the taper has a curved surfaced taper in at least one part thereof.~~

37. (currently amended) A combination according to claim 33; wherein a taper angle of the surface of the tapered hole increases in a direction of the fine aperture. ~~A near field optical head according to claim 36, wherein at least one of the curved surfaced taper increases in angle of spread in the vicinity of the very small aperture as the aperture is approached.~~

38. (currently amended) A combination as in one of claims 33-37; wherein the tapered hole ~~near-field optical head as in any one of claims 33-37; wherein the taper~~ is asymmetric about a center axis of the ~~taper~~ tapered hole passing through the apex.

39. (currently amended) A combination according to claim 33; wherein at least a portion of ~~near field optical head according to claim 33, wherein~~ the optical ~~light~~ propagation member is made of a ~~in at least one part is of~~ dielectric material.

40. (currently amended) A combination according to claim 33; wherein at least a portion of ~~near field optical head according to claim 33, wherein~~ the ~~light~~ optical propagation member includes air as a light propagation path ~~in at least one part is of air~~.

41. (currently amended) A combination according to claim 33; wherein at least a portion of a surface of the tapered hole is covered with a metal. ~~near field optical head according to claim 33, wherein the taper in at least one part is covered by metal.~~

42. (currently amended) A combination according to claim 33; wherein at least a portion of a surface of the tapered hole is covered with a dielectric material. ~~near field optical head according to claim 33, wherein the taper in at least one part is covered by dielectric.~~

43. (currently amended) A combination according to claim 42; wherein the light propagating member is made of a dielectric material having a refractivity higher than a refractivity of the portion of the surface of the tapered hole. ~~near field optical head according to claim 42, wherein the taper in at least one part is covered by dielectric having a refractivity smaller than a refractivity of dielectric constituting the light propagation member.~~

44. (currently amended) A combination according to claim 33; further comprising a protrusion protruding from the fine aperture. ~~near field optical head according to claim 33, comprising a protrusion protruded from the very small aperture.~~

45. (currently amended) A combination according to claim 44; wherein at least a portion of the protrusion is made of a dielectric material. ~~near field optical head according to claim 44, wherein the protrusion in at least one part is dielectric.~~

46. (currently amended) A combination according to claim 44; wherein at least a portion of the protrusion is covered with a metal. ~~near field optical head according to claim 44, wherein the protrusion in at least one part is covered by metal.~~

47. (currently amended) A combination according to claim 44; wherein the protrusion is generally conical- or pyramidal-shaped. ~~near field optical head according to claim 44, wherein the protrusion is in a conical or pyramidal form.~~

48. (currently amended) A combination according to claim 33; further comprising means for maintaining the recording medium at a constant position relative to the near field optical head. ~~according to claim 33, wherein a relative position to the recording medium is kept constant by a floating force undergone from a side of the recording medium and a load weight applied toward the recording medium.~~

49. (currently amended) A combination according to claim 48; wherein the means for maintaining the recording medium at a constant position comprises a weight disposed on the recording medium and air pressure generated from high speed movement of the recording medium for applying a floating force on the recording medium from a side surface thereof. ~~near field optical head according to claim 48, wherein the floating force is an air pressure caused due to high speed motion of the recording medium.~~

50. (currently amended) A combination according to claim 48; wherein the means for maintaining the recording medium at a constant position comprises ~~near field optical~~

~~head according to claim 48, wherein the floating force is due to a pressure of~~ a weight disposed on the recording medium and a liquid having a uniform thickness disposed ~~applied in a constant thickness~~ on a surface of the recording medium for applying a floating force on the recording medium from a side surface thereof..

51. (currently amended) A combination according to claim 33; further comprising means for controlling an electrical interaction between the near field optical head and the recording medium to maintain a position of the recording medium constant relative to the near field optical head. ~~according to claim 33, wherein a relative position to the recording medium is kept constant by controlling an electric interaction caused with the recording medium.~~

52. (currently amended) A combination according to claim 33; further comprising means for controlling an interatomic force between the near field optical head and the recording medium to maintain a position of the recording medium constant relative to the near field optical head. ~~according to claim 33, wherein a relative position to the recording medium is kept constant by controlling an interatomic force interaction caused with the recording medium.~~

53. (currently amended) A combination according to claim 33; wherein the near field optical head has ~~according to claim 33, having~~ a slider structure disposed on ~~in~~ a surface thereof opposite ~~opposed~~ to the recording medium.

54. (currently amended) A combination according to claim 53; wherein the fine aperture is formed in a surface of the slider structure. ~~near field optical head according to claim 33, wherein the vary small aperture is formed in a slider surface.~~

55. (currently amended) A combination according to claim 54; wherein a distance ~~near field optical head according to claim 54, wherein a spacing~~ between the recording medium and the fine ~~very small~~ aperture is approximately equal to a distance ~~is nearly same as a spacing~~ between the recording medium and the ~~slider~~ surface of the slider.

56. (currently amended) A combination according to claim 53; wherein the tapered hole and the slider structure are disposed proximate one another. ~~near field optical head according to claim 53, wherein the taper and the slider structure are provided in proximity with.~~

57. (currently amended) A combination according to claim 53; wherein the slider structure surrounds a periphery of the taper hole over a range of 180 degrees. ~~near field optical head according to claim 53, wherein the slider structure is arranged in a manner surrounding by 180 degrees over a periphery of the taper.~~

58. (currently amended) A combination according to claim 53; wherein at least a portion of ~~near field optical head according to claim 53, wherein~~ the slider structure is made of a ~~in at least one part is~~ dielectric material.

59. (currently amended) A combination according to claim 53; wherein at least a portion of ~~near field optical head according to claim 53, wherein~~ the slider structure is made of ~~in at least one part is~~ metal.

60. (currently amended) A combination according to claim 33; wherein at least one part of ~~near field optical head according to claim 33, wherein~~ the light reflection layer ~~in at least one part~~ is made of metal.

61. (currently amended) A combination according to claim 33; wherein ~~near field optical head according to claim 33, wherein~~ the light reflection layer has a ~~focusing~~ function of focusing the bent light ~~to focus the light reflected~~ toward the ~~very small~~ fine aperture.

62. (currently amended) A combination according to claim 61; wherein ~~near field optical head according to claim 61, wherein~~ the light reflection layer has a concave portion having a light reflecting surface ~~in a concave surface~~.

63. (currently amended) A combination according to claim 61; wherein ~~near field optical head according to claim 61, wherein~~ the light reflection layer has a light reflecting surface having a grating structure.

64. (currently amended) A combination according to claim 33; wherein ~~near field optical head according to claim 33, wherein~~ the light reflection layer comprises a portion of ~~is formed by working one part of~~ the light introducing part ~~and laying on a worked surface thereof~~.

65. (currently amended) A combination according to claim 33; wherein ~~near field optical head according to claim 33, wherein~~ the light reflection layer is formed on an etched surface portion of a substrate, the etched surface portion being disposed at an angle relative to the optical path of the light propagated through the light introducing part. ~~by laying on a slant surface formed at a constant angle as determined by a planar orientation due to chemical etching.~~

66. (currently amended) A combination according to claim 65; wherein the substrate is made of single crystal silicon; and wherein the etched surface portion of the substrate has a (111) planar orientation. ~~near field optical head according to claim 65, wherein the slant surface having a constant angle as determined by a planar orientation is in a (111) plane formed in (100) planed single crystal silicon.~~

67. (currently amended) A combination according to claim 33; wherein a bending direction of the light bent by ~~near field optical head according to claim 33, wherein~~ the light reflection layer is ~~has a reflecting direction of light of~~ approximately 70 degrees with respect to the optical path of the light propagated through ~~a propagation direction in~~ the light introducing part.

68. (currently amended) A combination according to claim 33; wherein a least a portion of the light introducing part is made of a dielectric material. ~~near field optical head according to claim 33, wherein the light introducing part in at least one part is dielectric.~~

69. (currently amended) A combination according to claim 33; wherein at least a portion of ~~near field optical head according to claim 33, wherein~~ the light introducing part includes air as the optical path ~~in at least one part is air~~.

70. (currently amended) A combination according to claim 33; wherein at least a portion of ~~near field optical head according to claim 33, wherein~~ the light introducing part comprises ~~in at least one part is~~ an optical fiber.

71. (currently amended) A combination according to claim 33; wherein at least a portion of ~~near field optical head according to claim 33, wherein~~ the light introducing part comprises ~~in at least one part includes a combination of~~ a core having a relatively high ~~in~~ refractivity and a clad having a relatively low ~~in~~ refractivity.

72. (currently amended) A combination according to claim 33; wherein at least a portion of ~~near field optical head according to claim 33, wherein~~ the light introducing part ~~in at least one part~~ has a focusing function for focusing the propagated ~~to focus~~ light ~~to be propagated~~ to the ~~very small~~ fine aperture.

73. (currently amended) A combination according to claim 72; wherein ~~near field optical head according to claim 72, wherein~~ the light introducing part has a ~~vertical~~ surface disposed vertically with respect to a light propagation direction, the vertical surface having ~~at least one part made in~~ a convex portion ~~form~~.

74. (currently amended) A combination according to claim 72; wherein at least a portion of ~~near field optical head according to claim 72, wherein~~ the light introducing part ~~in at least one part~~ has a grating structure.

75. (currently amended) A combination according to claim 72; wherein at least a portion of ~~near field optical head according to claim 72, wherein~~ the light introducing part has a ~~in at least one part has a gradient of~~ refractivity gradient which varies in a ~~having a refractivity different~~ stepwise manner.

76. (currently amended) A combination according to claim 33; further comprising a focusing member disposed on at least one portion of the tapered hole for focusing light toward the fine aperture. ~~near field optical head according to claim 33, wherein the taper in at least one part is provided with a focus functioning member having a focusing function to focus light to the very small aperture.~~

77. (currently amended) A combination according to claim 33; further comprising a focusing member disposed in at least one portion of the optical path between the light reflection layer and the tapered hole for focusing light toward the fine aperture. ~~near field optical head according to claim 33, wherein a focus functioning member having a focusing~~

~~function to focus light to the very small aperture is provided in at least one part of an optical path between the light reflection layer and the taper.~~

78. (currently amended) A combination according to claim 33; further comprising a focusing member disposed on at least one portion of the light reflection layer for focusing light toward the fine aperture. ~~near field optical head according to claim 33, wherein a focus functioning member having a focusing function to focus light to the very small aperture is provided in at least one part of the light reflection layer.~~

79. (currently amended) A combination according to claim 33; further comprising a focusing member disposed on at least one portion of the light introducing part for focusing light toward the fine aperture. ~~near field optical head according to claim 33, wherein a focus functioning member having a focusing function to focus light to the very small aperture is provided in at least one part of the light introducing part.~~

80. (currently amended) A combination as in one of claims 76-79; wherein at least one portion of the focusing member is made of a dielectric material. ~~near-field optical head as in any one of claims 76-79; wherein at least one part~~

~~of the focus functioning member is comprised of a dielectric material.~~

81. (currently amended) A combination as in one of claims 76-79; wherein ~~near-field optical head as in any one of claims 76-79; wherein~~ the ~~focus functioning~~ focusing member has a vertical surface extending in a light propagation direction, the vertical surface having at least one convex portion.

82. (currently amended) A combination according to claim 81; wherein ~~near-field optical head according to claim 81; wherein~~ the ~~focus functioning~~ focusing member is generally spherical-shaped.

83. (currently amended) A combination as in one of claims 76-79; wherein ~~near-field optical head as in any one of claims 76-79; wherein~~ at least one part of the focusing ~~focus functioning~~ member has a refractive gradient which varies in a ~~is variable~~ stepwise manner.

84. (currently amended) A combination as in one of claims 76-79; wherein ~~near-field optical head as in any one of claims 76-79; wherein~~ at least one part of the ~~focus functioning~~ focusing member has a grating structure.

85. (currently amended) A combination according to claim 33; wherein the fine ~~near field optical head according to claim 33, wherein the very small~~ aperture and the light reflection layer are disposed proximate one another. ~~provided in proximity with.~~

86. (currently amended) A combination according to claim 85; wherein ~~near field optical head according to claim 85, wherein~~ a distance between the ~~very small~~ fine aperture and the light reflection layer is 20 μm or less.

87. (currently amended) A combination according to claim 33; further comprising a substrate disposed opposite to the recording medium and having the optical propagation member. ~~near field optical head according to claim 33, wherein an apertured substrate having the very small aperture is provided on a surface opposed to the recording medium~~.

88. (currently amended) A combination according to claim 87; wherein ~~near field optical head according to claim 87, wherein~~ the light reflection layer is ~~laid and~~ formed on a surface of a substrate disposed opposite to a surface of the substrate in which the fine aperture of the optical propagation member is formed. ~~an opposite surface forming the very small aperture of the apertured substrate.~~

89. (currently amended) A combination according to claim 87; wherein ~~near field optical head according to claim 87, wherein~~ the light reflection layer is bonded to a surface of a substrate disposed opposite to a surface of the substrate in which the fine aperture of the optical propagation member is formed. ~~and formed on an opposite surface forming the very small aperture of the apertured substrate.~~

90. (currently amended) A combination according to claim 87; wherein ~~near field optical head according to claim 87, wherein~~ the light reflection layer is ~~laid and~~ formed in a surface of the substrate in which the fine aperture of the optical propagation member is formed ~~forming the very small aperture of the apertured substrate~~.

91. (currently amended) A combination according to claim 87; wherein ~~near field optical head according to claim 87, wherein~~ the light introducing part is formed on a surface of a substrate disposed opposite to a surface of the substrate in which the fine aperture of the optical propagation member is formed. ~~is laid and formed on an opposite surface forming the very small aperture of the apertured substrate.~~

92. (currently amended) A combination according to claim 87; wherein ~~near field optical head according to claim 87, wherein~~ the light introducing part is bonded to a surface

of a substrate disposed opposite to a surface of the substrate in which the fine aperture of the optical propagation member is formed. ~~and formed on an opposite surface forming the very small aperture of the apertured substrate.~~

93. (currently amended) A combination according to claim 87; wherein ~~near field optical head according to claim 87, wherein~~ the light introducing part is ~~laid and~~ formed in a surface of the substrate in which the fine aperture of the optical propagation member is formed. ~~forming the very small aperture of the apertured substrate.~~

94. (currently amended) A combination according to claim 87; wherein the focusing member is formed in a surface of a substrate opposite to a surface of the substrate in which the fine aperture of the optical propagation member is formed. ~~near field optical head according to claim 87, wherein the light focus functioning member is laid and formed on an opposite surface forming the very small aperture of the apertured substrate.~~

95. (currently amended) A combination according to claim 87; wherein the focusing member is bonded to a surface of a substrate opposite to a surface of the substrate in which the fine aperture of the optical propagation member is formed. ~~near field optical head according to claim 87, wherein the~~

~~light focus functioning member is bonded and formed on an opposite surface forming the very small aperture of the apertured substrate.~~

96. (currently amended) A method of ~~In~~ manufacturing a near-field ~~near field~~ optical head, comprising the steps of: forming in a first substrate ~~having a very small aperture formed at an apex of a taper formed by~~ a light propagation member having a tapered hole forming a sharpened ~~at a~~ tip configured to converge toward a recording medium during use of the near-field optical head, the tip having a fine aperture formed at an apex thereof; forming in a second substrate a light introducing part for propagating light ~~generally~~ along an optical path disposed in a direction generally parallel to a surface of the ~~direction with the~~ recording ~~medium, a~~ medium; forming a light reflection layer on a surface of the second substrate for reflecting light propagated through the light introducing part toward the fine aperture ~~very small aperture, and~~ of the light propagation member; and chemically etching a surface of a third substrate to form a ~~focus functioning~~ focusing member disposed ~~provided on an optical path~~ between the light reflection layer and the tapered hole of the light propagation member and having a convex portion. ~~taper and having a convex form in at least one part of a surface vertical to a direction of light propagation, a method~~

~~for manufacturing a near field optical head characterized in that: the focus functioning member is formed by working a surface thereof by chemical etching.~~

97. (currently amended) A method of ~~In~~ manufacturing a ~~near field~~ near-field optical head, comprising the steps of: forming in a first substrate ~~having a very small aperture formed at an apex of a taper formed by~~ a light propagation member having a tapered hole forming a sharpened ~~at a~~ tip configured to converge toward a recording medium during use of the near-field optical head, the tip having a fine aperture formed at an apex thereof; forming in a second substrate a light introducing part for propagating light ~~generally~~ along an optical path disposed in a direction generally parallel to a surface of the ~~direction with the~~ recording ~~medium, a~~ medium; forming a light reflection layer on a surface of the second substrate for reflecting light propagated through the light introducing part toward the fine aperture ~~very small aperture, and~~ of the light propagation member; and subjecting a surface of a third substrate to selective ion exchange to form a ~~focus functioning~~ focusing member disposed ~~provided on an optical path~~ between the light reflection layer and the tapered hole of the light propagation member and having a convex portion. ~~taper and having a convex form in at least one part of a surface vertical to a direction of light~~

~~propagation, a method for manufacturing a near field optical head characterized in that: the focus functioning member is formed by exchanging ions from one part of a surface thereof.~~

98. (currently amended) A method of ~~In~~ manufacturing a ~~near field~~ near-field optical head, comprising the steps of: forming in a first substrate ~~having a very small aperture formed at an apex of a taper formed by~~ a light propagation member having a tapered hole forming a sharpened ~~at a~~ tip configured to converge toward a recording medium during use of the near-field optical head, the tip having a fine aperture formed at an apex thereof; forming in a second substrate a light introducing part for propagating light ~~generally~~ along an optical path disposed in a direction generally parallel to a surface of the ~~direction with the~~ recording ~~medium, a~~ medium; forming a light reflection layer on a surface of the second substrate for reflecting light propagated through the light introducing part toward the fine aperture ~~very small aperture, and~~ of the light propagation member; and subjecting a surface of a third substrate to selective ion exchange to form a ~~focus functioning~~ focusing member disposed ~~provided on an optical path~~ between the light reflection layer and the tapered hole of the light propagation member and having a refractive gradient which varies in a stepwise manner. ~~taper and having a refractive gradient having a refractivity~~

~~different stepwise, a method for manufacturing a near field optical head characterized in that: the focus functioning member is formed by exchanging ions from one part of a surface thereof.~~

99. (currently amended) A method of ~~In~~ manufacturing a ~~near field~~ near-field optical head, comprising the steps of: forming in a first substrate ~~having a very small aperture formed at an apex of a taper formed by~~ a light propagation member having a tapered hole forming a sharpened ~~at a~~ tip configured to converge toward a recording medium during use of the near-field optical head, the tip having a fine aperture formed at an apex thereof; forming in a second substrate a light introducing part for propagating light ~~generally~~ along an optical path disposed in a direction generally parallel to a surface of the ~~direction with the~~ recording ~~medium, a~~ medium; forming a light reflection layer on a surface of the second substrate for reflecting light propagated through the light introducing part toward the fine aperture ~~very small aperture, and~~ of the light propagation member; and bringing a surface of a third substrate into contact with a liquid having a curved surface and exposed to UV radiation to form a ~~focus functioning~~ focusing member disposed ~~provided on an optical path~~ between the light reflection layer and the tapered hole of the light propagation member and having a convex portion.

~~taper and having a convex form in at least one part of a surface vertical to a direction of light propagation, a method for manufacturing a near field optical head characterized in that: the focus functioning member is formed by setting with UV radiation a liquid having a curved surface due to a surface tension.~~

100. (currently amended) A method of ~~In~~ manufacturing a ~~near field~~ near-field optical head, comprising the steps of: forming in a first substrate ~~having a very small aperture formed at an apex of a taper formed by~~ a light propagation member having a tapered hole forming a sharpened ~~at a~~ tip configured to converge toward a recording medium during use of the near-field optical head, the sharpened tip having a fine aperture formed at an apex thereof; forming in a second substrate a light introducing part for propagating light ~~generally~~ along an optical path disposed in a direction generally parallel to a surface of the ~~direction with the~~ recording ~~medium, a~~ medium; forming a light reflection layer on a surface of the second substrate for reflecting light propagated through the light introducing part toward the ~~very small aperture, and~~ fine aperture of the light propagation member; and bringing a surface of a third substrate into contact with a thermosetting liquid having a curved surface to form a ~~focus functioning~~ focusing member disposed ~~provided on~~

~~an optical path~~ between the light reflection layer and the tapered hole of the light propagation member and having a convex portion. ~~taper and having a convex form in at least one part of a surface vertical to a direction of light propagation, a method for manufacturing a near field optical head characterized in that: the focus functioning member is formed by thermosetting a liquid having a curved surface due to a surface tension.~~

101. (currently amended) A method of ~~In~~ manufacturing a ~~near field~~ near-field optical head, comprising the steps of: forming ~~having a very small aperture formed at an apex of a taper formed by~~ a light propagation member by subjecting a surface of a first substrate to a chemical reaction to form a tapered hole forming a sharpened ~~at a~~ tip configured to converge toward a recording medium during use of the near-field optical head, the sharpened tip having a fine aperture formed at an apex thereof; forming in a second substrate a light introducing part for propagating light ~~generally~~ along an optical path disposed in a direction generally parallel to a surface of the ~~direction with the~~ recording ~~medium, a~~ medium; and forming a light reflection layer on a surface of the second substrate for reflecting light propagated through the light introducing part toward the fine aperture of the light propagation member. ~~very small~~

~~aperture,a method for manufacturing a near field optical head characterized in that: the taper is formed by conducting surface working using chemical reaction.~~

102. (currently amended) A method of ~~In~~ manufacturing a ~~near field~~ near-field optical head, comprising the steps of: forming ~~having a very small aperture formed at an apex of a taper formed by~~ a light propagation member by forming in a first substrate a tapered hole having a sharpened ~~at a~~ tip configured to converge toward a recording medium during use of the near-field optical head, covering at least a surface of the tapered hole at the tip thereof with a metal, and plastically deforming the metal in the vicinity of an apex of the tip using a material harder than the metal to form a fine aperture at the apex; forming in a second substrate a light introducing part for propagating light ~~generally~~ along an optical path disposed in a direction generally parallel to a surface of the ~~direction with the~~ recording ~~medium, a~~ medium; and forming a light reflection layer on a surface of the second substrate for reflecting light propagated through the light introducing part toward the fine aperture of the light propagating member. ~~very small aperture, and a metal covering the taper,a method for manufacturing a near field optical head characterized in that: the very small aperture is formed by plastically deforming the metal in a vicinity of an apex of the taper with using a material harder than the metal.~~

103. (currently amended) ~~In a near field optical head for recording and reading-out information by utilizing near field light produced from a very small aperture, a~~ A method for manufacturing a ~~near field~~ near-field optical head for recording information to and reading-out information from a recording medium, comprising the steps of: ~~characterized by including:~~

forming a tapered hole having a sharpened tip in a first surface of a dielectric material, the sharpened tip being configured to converge ~~a process of forming in a surface opposed to a recording medium a taper of a dielectric sharpened at a tip~~ toward ~~the~~ a recording medium during use of the near field optical head;

disposing ~~a process of laying~~ a metal film on a periphery of the ~~taper~~ tapered hole including the sharpened tip;

~~a process of working a~~ deforming the metal film in the vicinity of the sharpened tip to form a fine ~~at a tip of the taper to thereby form a very small~~ aperture;

~~a process of~~ working a second surface of the dielectric material opposite the first surface thereof to form a convex surface portion; and ~~an opposite surface forming the very small aperture to thereby form a convex form; and~~

~~a process of~~ bonding onto the convex ~~convex-worked~~ surface portion of the dielectric material a light introducing part for propagating light ~~generally~~ in a direction generally parallel ~~with~~ to a surface of the recording medium and a light reflection layer for reflecting light propagated through the light introducing part toward the fine ~~very small~~ aperture.

104. (currently amended) ~~In a near field optical head for recording and reading-out information by utilizing near field light produced from a very small aperture, a~~ A method for manufacturing a ~~near field~~ near-field optical head for recording information to and reading-out information from a recording medium, comprising the steps of: ~~characterized by including:~~

forming a tapered hole having a sharpened tip in a first surface of a dielectric material, the sharpened tip being configured to converge ~~a process of forming in a surface opposed to a recording medium a taper of a dielectric sharpened at a tip~~ toward ~~the~~ a recording medium during use of the near field optical head;

disposing ~~a process of laying~~ a metal film on a periphery of the ~~taper~~ tapered hole including the sharpened tip;

~~a process of working a~~ deforming the metal film in the vicinity of the sharpened tip to form a fine ~~at a tip of the taper to thereby form a very small~~ aperture;

~~a process of exchanging ions on~~ subjecting a second surface of the dielectric material opposite the first surface thereof to selective ion exchange to form a convex surface portion; and ~~an opposite surface forming the very small aperture to thereby form a convex form; and~~

~~a process of~~ bonding onto the convex ~~convex-worked~~ surface portion of the dielectric material a light introducing part for propagating light ~~generally~~ in a direction generally parallel ~~with~~ to a surface of the recording medium and a light reflection layer for reflecting light propagated through the light introducing part toward the fine ~~very small~~ aperture.

105. (currently amended) ~~In a near field optical head for recording and reading-out information by utilizing near field light produced from a very small aperture, a~~ A method for manufacturing a ~~near field~~ near-field optical head for recording information to and reading-out information from a recording medium, comprising the steps of: ~~characterized by including:~~

forming a tapered hole having a sharpened tip in a first surface of a dielectric material, the sharpened tip being configured to converge ~~a process of forming in a surface opposed to a recording medium a taper of a dielectric sharpened at a tip~~ toward ~~the~~ a recording medium during use of the near field optical head;

disposing ~~a process of laying~~ a metal film on a periphery of the ~~taper~~ tapered hole including the sharpened tip;

~~a process of working a~~ deforming the metal film in the vicinity of the sharpened tip to form a fine ~~at a tip of the taper to thereby form a very small~~ aperture;

~~a process of exchanging ions on~~ subjecting a second surface of the dielectric material opposite the first surface thereof to selective ion exchange to provide the second surface with a refractivity gradient which varies in a stepwise manner; and ~~an opposite surface forming the very small aperture to thereby form a convex form; and~~

~~a process of~~ bonding onto the second ~~a~~ surface of the dielectric material ~~forming the refractivity gradient~~ a light introducing part for propagating light ~~generally~~ in a direction generally parallel ~~with~~ to a surface of the recording medium and a light reflection layer for reflecting light propagated through the light introducing part toward the fine ~~very small~~ aperture.

106. (currently amended) ~~In a near field optical head for recording and reading-out information by utilizing near field light produced from a very small aperture, a~~ A method for manufacturing a ~~near field~~ near-field optical head for recording information to and reading-out information from

a recording medium, comprising the steps of: ~~characterized by including:~~

forming a tapered hole having a sharpened tip in a first surface of a dielectric material, the sharpened tip being configured to converge ~~a process of forming in a surface opposed to a recording medium a taper of a dielectric sharpened at a tip~~ toward ~~the~~ a recording medium during use of the near field optical head;

disposing ~~a process of laying~~ a metal film on a periphery of the ~~taper~~ tapered hole including the sharpened tip;

~~a process of working a~~ deforming the metal film in the vicinity of the sharpened tip to form a fine ~~at a tip of the taper to thereby form a very small~~ aperture;

~~a process for~~ applying a liquid over a second surface of the dielectric material opposite the first surface thereof and subjecting the liquid to UV radiation to form a convex surface portion; and ~~an opposite surface forming the very small aperture and UV-set same to thereby form a convex form; and~~

~~a process of~~ bonding onto the convex surface portion of the dielectric material ~~a surface formed in the convex form~~ a light introducing part for propagating light ~~generally~~ in a direction generally parallel ~~with~~ to a surface of the

recording medium and a light reflection layer for reflecting light propagated through the light introducing part toward the fine ~~very small~~ aperture.

107. (currently amended) ~~In a near field optical head for recording and reading-out information by utilizing near field light produced from a very small aperture, a~~ A method for manufacturing a ~~near field~~ near-field optical head for recording information to and reading-out information from a recording medium, comprising the steps of: ~~characterized by including:~~

forming a tapered hole having a sharpened tip in a first surface of a dielectric material, the sharpened tip being configured to converge ~~a process of forming in a surface opposed to a recording medium a taper of a dielectric sharpened at a tip~~ toward ~~the~~ a recording medium during use of the near field optical head;

disposing ~~a process of laying~~ a metal film on a periphery of the ~~taper~~ tapered hole including the sharpened tip;

~~a process of working a~~ deforming the metal film in the vicinity of the sharpened tip to form a fine ~~at a tip of the taper to thereby form a very small~~ aperture;

~~a process of~~ bonding a spherical lens on a second surface of the dielectric material ~~an~~ opposite to the first surface thereof; and ~~forming the very small aperture; and~~

~~a process of~~ bonding onto a surface of the spherical lens a light introducing part for propagating light ~~generally~~ in a direction generally parallel ~~with~~ to a surface of the recording medium and a light reflection layer for reflecting light propagated through the light introducing part toward the fine ~~very small~~ aperture.

108. (currently amended) ~~In a near field optical head for recording and reading-out information by utilizing near field light produced from a very small aperture, a~~ A method for manufacturing a ~~near field~~ near-field optical head for recording information to and reading-out information from a recording medium, comprising the steps of: ~~characterized by including:~~

~~a process of~~ forming in a first surface of a substrate a tapered hole having a first fine aperture at an apex thereof, the tapered hole being configured to converge toward a recording medium during use of the near field optical head; ~~opposed to a recording medium a taper of air sharpened at a tip toward the recording medium and a first very small aperture at an apex thereof;~~

disposing ~~a process of laying~~ a metal film on a periphery of the tapered hole; ~~taper to form a second very small aperture;~~

deforming the metal film in the periphery of the tapered hole to form a second fine aperture in the first surface of the substrate;

~~a process of~~ providing a dielectric material with a surface having a convex portion and bonding the ~~a~~ dielectric material to a second surface of the substrate opposite the first surface thereof; and ~~having a surface vertical to a direction of light propagation having a part formed in a convex form onto an opposite surface forming the second very small aperture; and~~

~~a process of~~ bonding onto the ~~a~~ surface of the dielectric material a light introducing part for propagating light in a direction generally ~~in a direction~~ parallel to ~~with~~ a surface of the recording medium and generally perpendicular to the surface of the dielectric material and a light reflection layer for reflecting light propagated through the light introducing part toward the first and second fine apertures ~~very small aperture~~.

109. (currently amended) ~~In a near-field optical head for recording and reading-out information by utilizing near field light produced from a very small aperture, a~~ A method for manufacturing a ~~near field~~ near-field optical head for recording information to and reading-out information from a recording medium, comprising the steps of: ~~characterized by including:~~

~~a process of~~ forming in a first surface of a substrate a tapered hole having a first fine aperture at an apex thereof, the tapered hole being configured to converge toward a recording medium during use of the near field optical head; ~~opposed to a recording medium a taper of air sharpened at a tip toward the recording medium and a first very small aperture at an apex thereof;~~

disposing ~~a process of laying~~ a metal film on a periphery of the tapered hole; ~~taper to form a second very small aperture;~~

deforming the metal film in the periphery of the tapered hole to form a second fine aperture in the first surface of the substrate;

providing a dielectric material having a refractivity gradient which varies in a stepwise manner and bonding the dielectric material to a second surface of the substrate opposite the first surface thereof; and

~~a process of bonding a dielectric having a refractivity gradient different in refractivity onto an opposite surface forming the second very small aperture; and~~

~~a process of~~ bonding onto the ~~a~~ surface of the dielectric material a light introducing part for propagating light in a direction generally ~~in a direction~~ parallel to ~~with~~ a surface of the recording medium and generally perpendicular

to the surface of the dielectric material and a light reflection layer for reflecting light propagated through the light introducing part toward the first and second fine apertures ~~very small aperture~~.

110. (currently amended) ~~In a near field optical head for recording and reading-out information by utilizing near field light produced from a very small aperture, a~~ A method for manufacturing a ~~near field~~ near-field optical head for recording information to and reading-out information from a recording medium, comprising the steps of: ~~characterized by including:~~

~~a process of~~ forming in a first surface of a substrate a tapered hole having a first fine aperture at an apex thereof, the tapered hole being configured to converge toward a recording medium during use of the near field optical head; ~~opposed to a recording medium a taper of air sharpened at a tip toward the recording medium and a first very small aperture at an apex thereof;~~

disposing ~~a process of laying~~ a metal film on a periphery of the tapered hole; ~~taper to form a second very small aperture;~~

deforming the metal film in the periphery of the tapered hole to form a second fine aperture in the first surface of the substrate;

~~a process of~~ bonding a spherical lens onto a second surface of the substrate opposite the first surface thereof; and ~~an opposite surface forming the second very small aperture; and~~

~~a process of~~ bonding onto the ~~a~~ surface of the spherical lens a light introducing part for propagating light in a direction generally ~~in a direction~~ parallel to ~~with~~ a surface of the recording medium and generally perpendicular to the surface of the dielectric material and a light reflection layer for reflecting light propagated through the light introducing part toward the first and second fine apertures ~~very small aperture~~.

111. (currently amended) ~~In a near field optical head for recording and reading-out information by utilizing near field light produced from a very small aperture, a~~ A method for manufacturing a ~~near field~~ near-field optical head for recording information to and reading-out information from a recording medium, comprising the steps of: ~~characterized by including:~~

~~a process of~~ forming in a first surface of a substrate a tapered hole having a first fine aperture at an apex thereof, the tapered hole being configured to converge toward a recording medium during use of the near field optical head; ~~opposed to a recording medium a taper of air sharpened~~

~~at a tip toward the recording medium and a first very small aperture at an apex thereof;~~

disposing ~~a process of laying~~ a metal film on a periphery of the tapered hole; ~~taper to form a second very small aperture;~~

deforming the metal film in the periphery of the tapered hole to form a second fine aperture in the first surface of the substrate;

~~a process of~~ applying ~~and UV-set~~ a liquid over a second surface of the substrate opposite the first surface thereof and subjecting the liquid to UV radiation to form a convex surface portion; and ~~an opposite surface forming the very small aperture and UV-set same to thereby form a convex form; and~~

~~a process of~~ bonding onto the convex surface portion of the dielectric material ~~a surface formed in the convex form~~ a light introducing part for propagating light ~~generally~~ in a direction generally parallel ~~with~~ to a surface of the recording medium and a light reflection layer for reflecting light propagated through the light introducing part toward the first and second fine apertures. ~~very small aperture.~~

112. (currently amended) A method of ~~In~~ manufacturing a ~~near field~~ near-field optical head, comprising the steps of: providing a first substrate having a fine

aperture formed in a first surface thereof; disposing a second substrate on a second surface of the first substrate opposite the first surface thereof; forming in the second substrate ~~having a very small aperture formed at an apex of a taper formed by~~ a light propagation member having a tapered hole forming a sharpened ~~at a~~ tip configured to converge toward a recording ~~medium, a~~ medium during operation of the near field optical head, the sharpened tip having a fine aperture formed at an apex thereof; forming in the second substrate a light introducing part for propagating light ~~generally~~ along an optical path disposed in a direction generally parallel to a surface of the ~~direction with the~~ recording ~~medium, a~~ medium; and forming in the second substrate a light reflection layer for reflecting light propagated through the light introducing part toward the fine aperture of the light propagation member. ~~very small aperture, and an apertured substrate having a very small aperture on a surface opposed to the recording medium, a method for manufacturing a near field optical head characterized in that: the very small aperture, the light introducing part and the light reflection layer are formed by working a material laid on an opposed surface of the apertured substrate to the recording medium.~~

113. (currently amended) ~~In a near field optical head for recording and reading-out information by utilizing near field light produced from a very small aperture, a~~ A method for manufacturing a ~~near field~~ near-field optical head for recording information to and reading-out information from a recording medium, comprising the steps of: ~~characterized by including:~~

subjecting a surface of a substrate to a ~~process of forming by using~~ chemical reaction to form a slant surface having a constant angle defined by a planar orientation;

~~a process of~~ forming a light reflection layer by disposing ~~laying~~ a metal film on the slant surface;

~~a process of~~ forming a light introducing part by disposing ~~laying~~ a dielectric material on a top surface of the light reflection layer;

~~a process of planarize~~ planarizing the dielectric material ~~layered~~;

subjecting a portion of the planarized material to a chemical reaction to form a tapered hole which converges toward a surface of a recording medium during use of the near field optical head; ~~a process of working a part of the dielectric into a taper sharpened toward the recording medium by using chemical reaction;~~

disposing ~~a process of laying~~ a metal film on a ~~top~~ surface of the tapered hole ~~taper~~; and

~~a process of~~ working the metal film at an apex of the tapered hole ~~taper~~ to ~~thereby~~ form a fine ~~very small~~ aperture.

114. (currently amended) A combination according to claim 33; wherein the at least one tapered hole comprises a plurality of tapered holes each having a fine aperture; and wherein ~~near field optical head according to claim 33, having the very small aperture in plurality of number, and~~ the light introducing part and the light reflection layer are configured ~~being formed~~ to guide light emitted from at least one light source toward the fine apertures. ~~a direction of the plurality of very small apertures.~~

115. (previously presented) A near-field optical head according to claim 20; wherein the inverted conical or pyramid hole has a plurality of slant surfaces each having a different degree of slant from the others.

116. (previously presented) A near-field optical head according to claim 21; wherein the inverted conical or pyramid hole has a plurality of slant surfaces each having a different degree of slant from the others.

117. (previously presented) A near-field optical head according to claim 20; wherein the optical waveguide comprises a core and a clad disposed over the core.

118. (previously presented) A near-field optical head according to claim 21; wherein the optical waveguide comprises a core and a clad disposed over the core.

119. (previously presented) A near-field optical head according to claim 22; wherein the optical waveguide comprises a core and a clad disposed over the core.